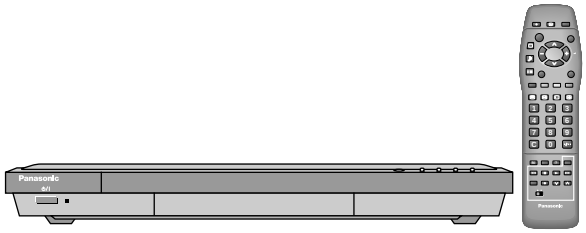
Panasonic®



Receiver
Operating Instructions

Model No. **TU-PT600B**

Q Link

OWNER I.D.

Please read these instruction before operating your set and retain them for future reference.

TQBC0502

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new Receiver.
To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.
Retain your purchase receipt also, and note down the model number and serial number of your set in the space provided on the rear cover of these instructions.

For United Kingdom and Republic of Ireland

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www.panasonic.co.uk (for UK customers only)

- Order accessory and consumable items for your product with ease and confidence by telephoning our Customer Care Centre Mon–Friday 9:00am–5:30pm. (Excluding public holidays.)
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This Technical Support Hot Line number is for Panasonic PC software related products only.

For Republic of Ireland, please use the Customer Care Centre number listed above for all enquiries.

For all other product related enquiries, please use the Customer Care Centre numbers listed above.

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Warnings and Precautions

- This set is designed to operate on A.C. 220 - 240 V, 50 Hz.
- This set is capable of receiving the following transmission standard, PAL I.
- The On/Off switch on this model does not fully disconnect the TV from the mains supply. Remove the mains plug from the wall socket when the TV set is not used for a prolonged period of time.

WARNING

- Place this set on a flat, level surface.
- Do not place anything heavy on it.
- Avoid location subject to excessive vibration.
- Adequate ventilation is essential to prevent failure of electrical components, we recommend that a gap of at least 10 cm is left all around this unit even when it is placed inside a cabinet or between shelves.
- Do not remove the cover as live parts are accessible when it is removed. There are no user serviceable parts inside.
- Do not insert foreign objects into the Ventilation Holes.
- Avoid exposing the Receiver to direct sunlight and other sources of heat.
- To prevent damage which might result in electric shock or fire, do not expose this set to rain or excessive moisture.
- Do not damage the Mains lead. (If damage occurs, replace immediately to avoid fire or shock hazards.)
- Never bring a magnet or magnetized object near the receiver because it will adversely affect the performance of the Receiver.
- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
  Do not place containers with water (flower vase, sups, cosmetics, etc.) above the set. (Including on shelves above, etc.)
- Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Plasma Display.
  Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

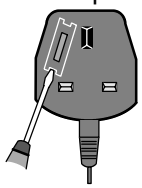
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a fitted three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. If the fuse is replaced then the replacement fuse must be 5 amp rated and should be approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the fitted plug has a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. Replacement fuse covers can be purchased through your local Panasonic dealer.

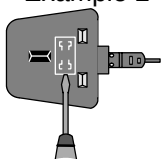
Example 1



If the fitted moulded plug is replaced, the fuse should be taken out and the cut-off plug disposed of safely. There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

How to replace the fuse (for plug type shown in example 1):
Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug (see example 1).

Example 2



How to replace the fuse (for plug type shown in example 2):
Lift open the fuse compartment, in the mains plug, with a screwdriver, and replace the fuse, then press the fuse cover down securely (see example 2).

IMPORTANT: -The wires in the mains lead of this appliance are coloured in accordance with the following code :-

BLUE : NEUTRAL BROWN : LIVE

As the colours of the wires in the mains lead of this appliance may not correspond to the markings identifying the terminals in your plug, proceed as follows :-

1. The BLUE wire must be connected to the terminal marked 'N' or coloured black.
2. The BROWN wire must be connected to the terminal marked 'L' or coloured red.

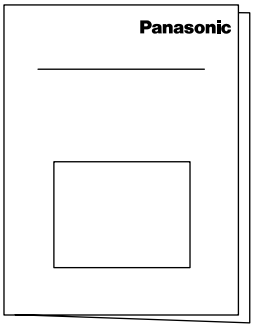
IMPORTANT NOTE: Under no circumstances should either of these wires be connected to the Earth terminal of the three pin plug, marked with the letter 'E' or the earth symbol.

Before Operating This Set

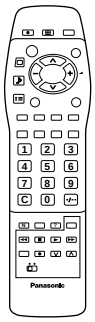
Supplied Accessories

Check the accessories before installations.

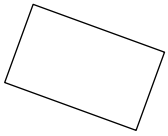
- Operating Instruction book (TQBC0502)



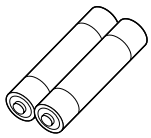
- Remote Control Transmitter (TNQE286)



- Warranty Card

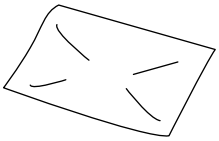


- Batteries for the Remote Control Transmitter (2 × R6 (UM3) size)



- Display Cable (K1HA26FA0002)

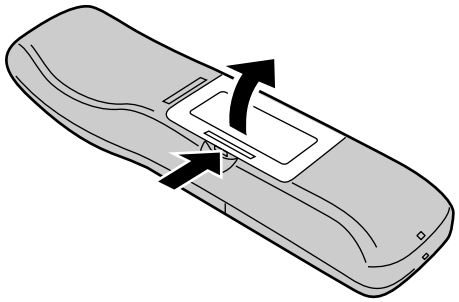
- Polishing Cloth (TPEX013)



Note:
If the cabinet is heavily soiled, wipe with a supplied polishing cloth.

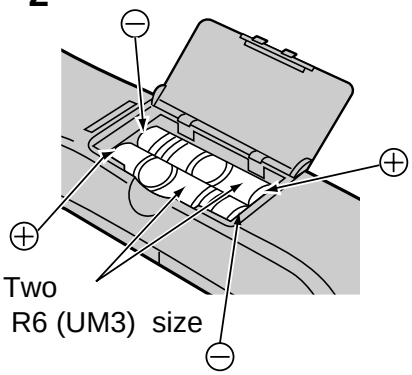
Fitting remote control batteries

1



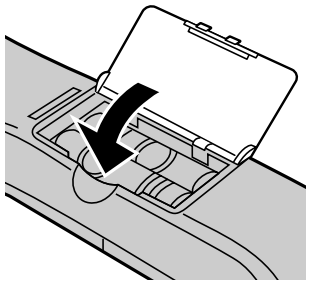
Open the battery cover

2



Insert batteries - note correct polarity (+ and -)

3

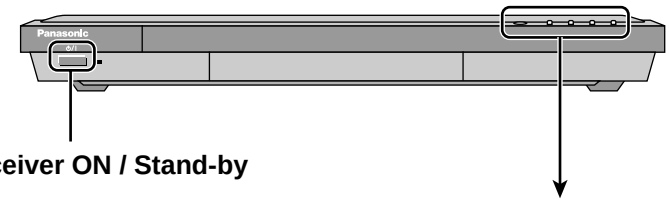


Replace the cover

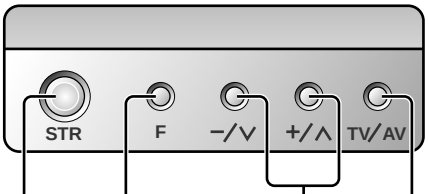
- Make sure that the batteries are fitted the correct way round.
- Do not mix old batteries with new batteries. Remove old, exhausted batteries immediately.
- Do not mix different battery types, i.e. Alkaline and Manganese or use rechargeable (Ni - Cad) batteries.

Basic controls

Top panel controls and Remote control



Receiver ON / Stand-by



Store
(see page 26 - 37, 40)

Function selection
(see on this page below)

Volume Up (+), Down (-)/ Programme Number Up (∧), Down (∨)
Volume adjustment which uses these buttons is performed after pressing Function button.
When programme number up (∧)/down (∨) buttons on the top panel of the main part are pressed in stand-by mode, this set turns on.

TV/AVmode Selection
Press to select TV, AV input signal modes sequentially.

Picture Menu (see page 20, 21)

Sound Menu (see page 22, 23)

Setup Menu (see page 24, 25)

Status button
Press to display programme position, programme name, channel number, time, NICAM mode, Aspect mode and programme table.

TV/TEXT Selection (see page 39, 40, 41)

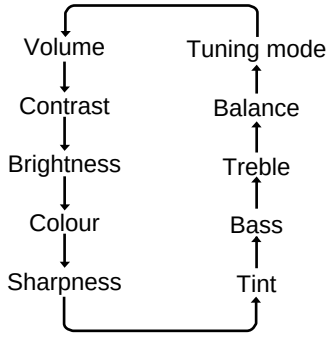
TEXT Favourite Page Selection (see page 40)

On Screen Help button (see page 19)

Store (see page 26 - 37, 40)
Stores some settings in TUNING menus and TELETEXT.

Normalization (see page 21, 23)
The N button will recall settings stored with STR.

Function selection
Displays the on screen display functions, press repeatedly to select from the available functions.
The following adjustments can be accessed directly.

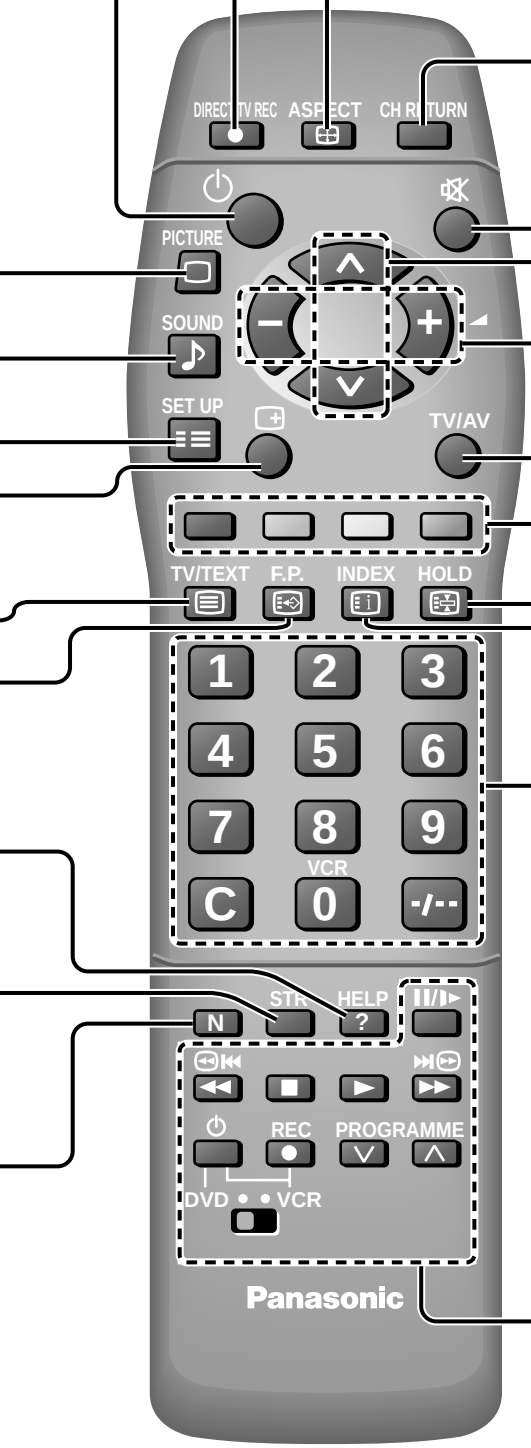


Notes:
- Tint : Displayed when receiving NTSC signals.
- Tuning mode : Not displayed during AV mode.

Remote control

Power (Stand-by)
This set must first be plugged into the wall outlet and turned on at the power switch.
Press this button to turn this set On from Standby mode, Press it again to turn this set OFF to Standby mode.

Note:
• It is also possible to turn this set On from STANDBY mode by pressing the “Direct Programme Number Selection” Buttons (0-9) on the Remote Control.



Direct TV Record button (see page 36)

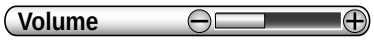
Aspect Control (see page 16, 17)

Channel return
Switches to previously view to channel.

Sound Mute
Press to mute the sound completely the “Mute” character will appear. Press again to restore the previous sound level, and cancel the mute.

Programme Number Selection
Press to select the next higher or lower Programme number.

Volume Adjustment
Press to increase or decrease the sound volume level.



TV/AV Mode Selection
Press to select TV, AV input signal modes sequentially.

Coloured buttons used for Programme edit (see page 28, 29, 30)
Teletext functions (see page 39, 40, 41)
AV Selection

TEXT hold (see page 40)

TEXT Index (see page 40)

Direct Programme Number
• Direct Programme Number Selection
You can select the number directly by pressing the “C” button and corresponding programme number buttons.

Channel Number 8..... C, 8

Channel Number 36..... C, 3, 6

• Direct Programme Number Selection
You can select the number directly by pressing “Number 0-9” buttons or by pressing “Two Digit” and “Number 0-9” buttons.

Programme Number 8 8

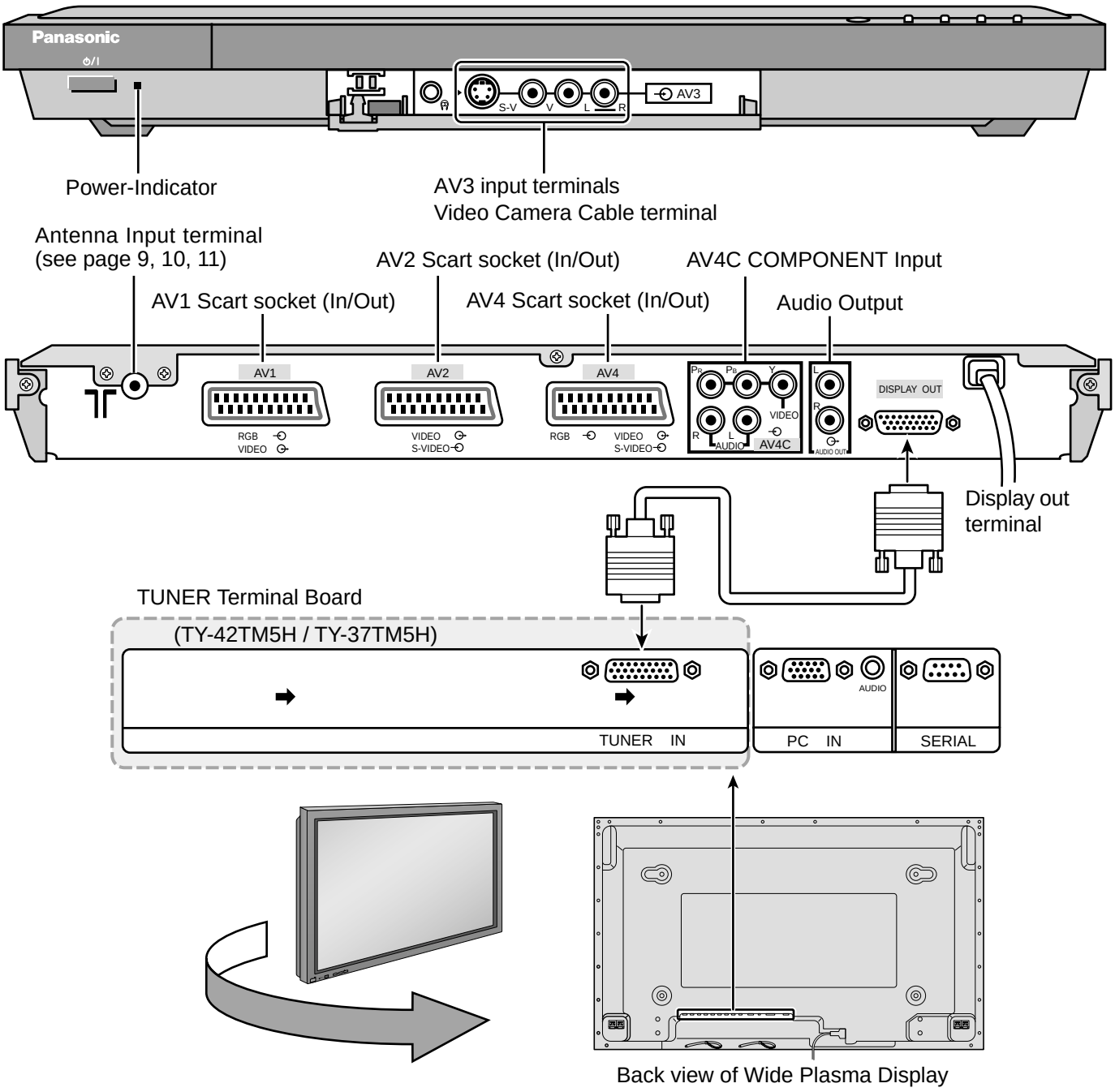
Programme Number 12.... -/--, 1, 2

VCR/LD/DVD Control
(see page 38)

Quick start Guide

1. Connection of Receiver to TUNER Terminal Board

(1) This Receiver is only for Panasonic Plasma Display with a TUNER Terminal Board. (TY-42TM5H, TY-37TM5H)
(2) And the TUNER Terminal Board (TY-42TM5H, TY-37TM5H) is compatible only with the products given below and those that will be sold hereafter.
(TH-50PHW5B, TH-42PHW5B, TH-42PW5B, TH-37PW5B)
(3) When DISPLAY OUT of this set and TUNER IN of a plasma Display are connected, an input select can not be performed in a Plasma Display. Please perform an input select by this set.
The PC IN terminal and SERIAL terminal on the back of a Plasma Display cannot be used.
The INPUT select, Volume Up '+' and Down '-' of the front of a Plasma Display do not operate.



Note:
Install the Receiver at least 15.7 inch (40 cm) away from the Wide Plasma Display to avoid interference.
Be sure the power to the Wide Plasma Display and Receiver is OFF before connecting cables.

2. Choose Your Connection Type

Connection and setting up options

- If connecting this set using an RF cable only, see below.
- If connecting this set using Scart and RF cables, see page 10.
- If connecting this set to a Q-Link (or Q-Link compatible) VCR, see page 10.
- If connecting this set to a Q-Link (or Q-Link compatible) VCR and a satellite receiver, see page 11.

What is Q-Link?
Q-Link allows direct communication between the set and a Q-Link (or Q-Link compatible) VCR, this will enable features such as downloading of tuning information from the set to the VCR.

When using a “NEXTVIEWLINK” VCR the main features possible are the following:

• Preset Download	Downloading of tuning information from the set to the VCR.
• Direct TV Record	For immediate recording of the current program (What You See Is What You Record).

When using a “Q-Link” VCR the main features possible are the following:

• Preset Download	Downloading of tuning information from the set to the VCR.
• Direct TV Record	For immediate recording of the current program (What You See Is What You Record).
• TV/VCR Auto Power On	When the VCR plays a tape the set will automatically switch On (From Stand-by) and select the AV2 input.
• VCR Auto Power Stand-by	When the set is switched into Stand-by, the VCR will also switch into Stand-by.
• VCR Image view On	If the set is in Stand-by mode and the VCR sends a menu to be displayed on the TV screen (e.g. Main menu), the set will automatically switch On and the menu will be displayed.

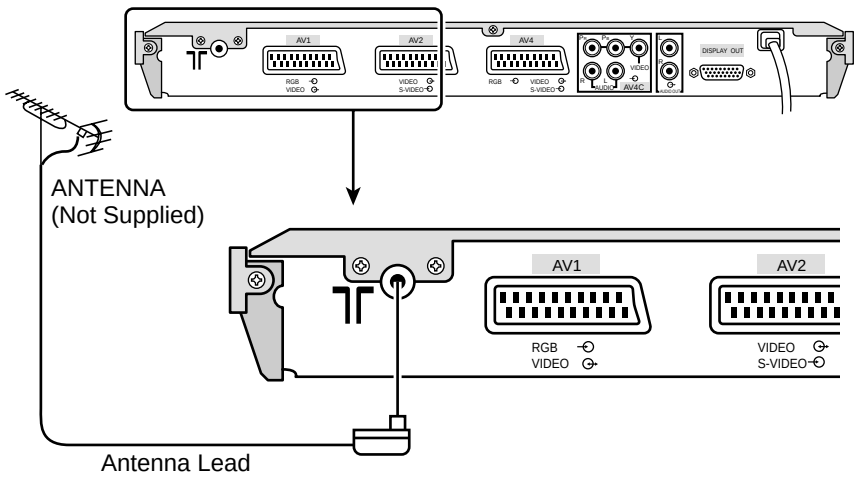
This set will also communicate with other VCRs that bear the following logos:

• “DATA LOGIC”	(a trademark of Metz Corporation).
• “Easy Link”	(a trademark of Philips Corporation).
• “Megalogic”	(a trademark of Grundig Corporation).
• “SMARTLINK”	(a trademark of Sony Corporation).

These VCRs may support some or all of the above funcitons. Refer to the VCR operating instruction book.

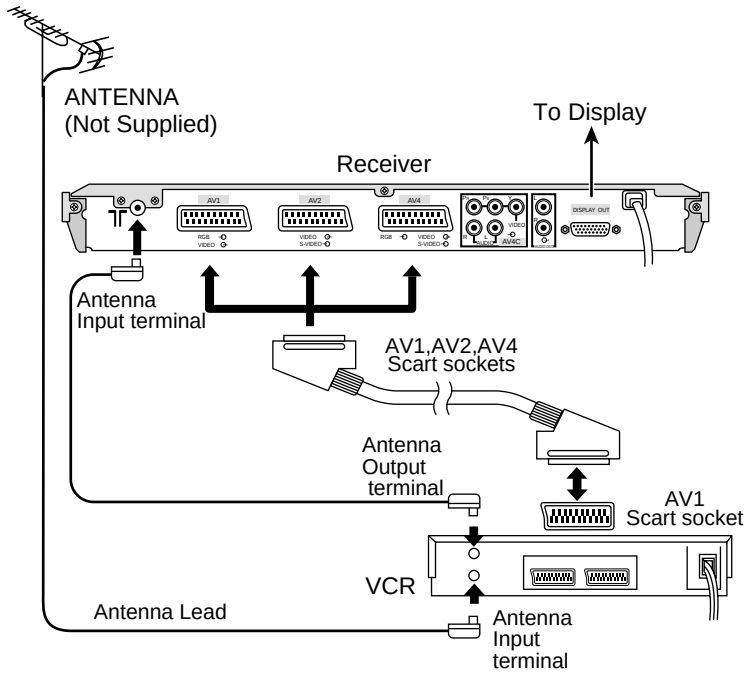
Further information on Q-Link can be found on page 36.
In order for Q-Link to function correctly, the Scart cables must be connected in a certain way, dependent on whether the set is being connected to a VCR or to a VCR and Satellite Receiver.

1. Connecting this set directly to an ANTENNA only



RF connection
Connect the Antenna lead into this set Antenna Input terminal (ℸ).

2. Connection of Receiver and VCR using Scart and RF cables

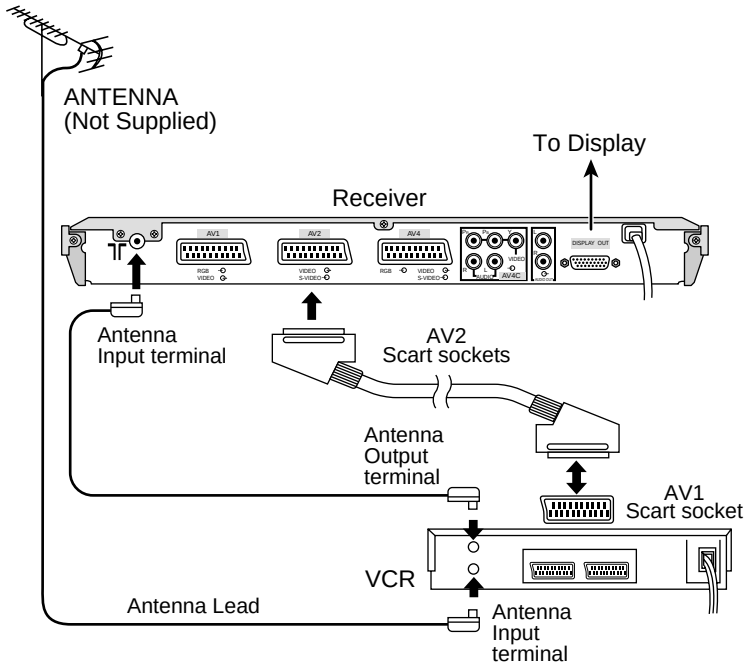


RF connection
Connect the ANTENNA to the Antenna Input terminal of the VCR and an RF cable from the VCR Antenna Output terminal to this set Antenna Input terminal (ℸ).

Scart Connections
The VCR can also be connected to this set using a Scart cable if you are using a Scart equipped VCR.
- Use this set's AV1 Scart socket for a VCR.
- Use this set's AV2 Scart socket for an S-Video VCR.
- Use this set's AV4 Scart socket for an S-Video VCR.

Notes:
- Additional equipment and cables are not supplied.
- Further details of audio / video connections can be found on pages 42 and 43.

3. Q-Link connection of Receiver and VCR using Scart and RF cables



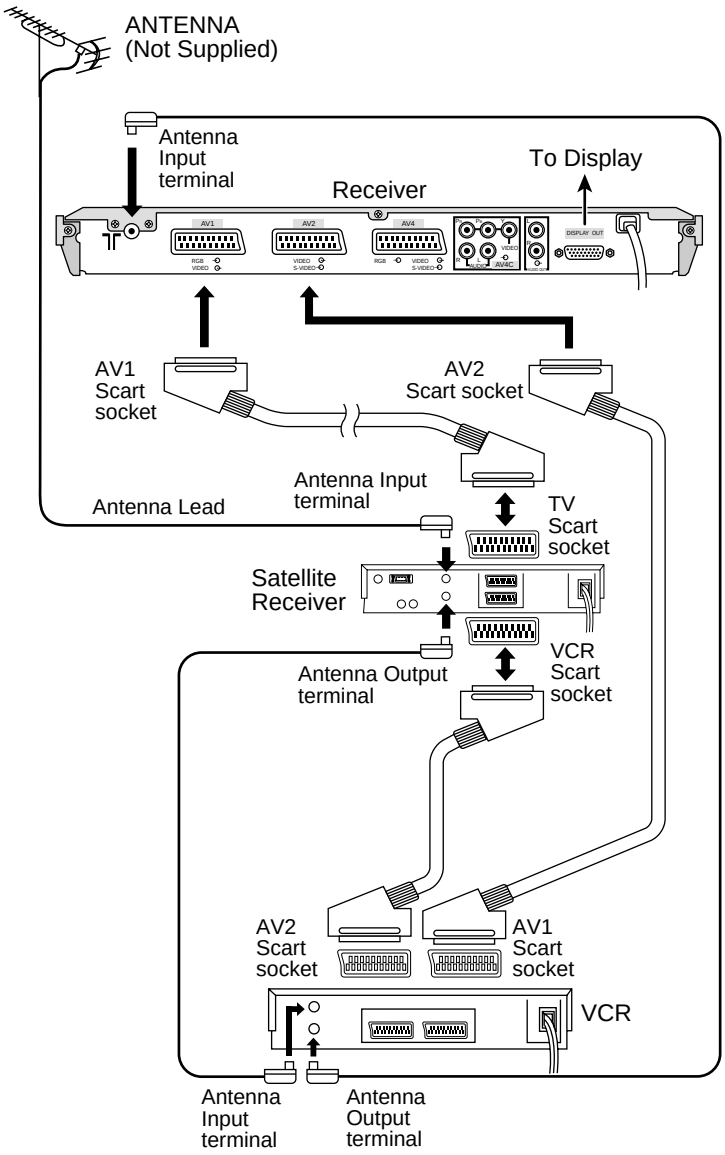
RF connection
Connect the ANTENNA to the Antenna Input terminal of the VCR and an RF cable from the VCR Antenna Output terminal to this set Antenna Input terminal (ℸ).

Scart connection
The VCR must be connected to the AV2 Scart socket of this set using a 'fully wired' Scart cable.

Note:
If using a 'Q-Link' VCR then the AV1 Scart socket of the VCR must be connected to the AV2 Scart socket of this set. If your VCR is not a 'Q-Link' VCR, please consult your VCR operating instruction book.

Notes:
- Additional equipment and cables are not supplied.
- Further details of audio/ video connections can be found on page 42 and 43.
- Further information for VCR and Satellite Receiver installation with this set can be found on page 9.

4. Q-Link connection of Receiver, VCR and Satellite using Scart and RF cables



For Q-Link to function correctly this set, VCR and Satellite Receiver must be connected as shown in the diagram below.

RF connections

- Connect an RF cable to the Antenna Input terminal of the Satellite Receiver.
- Connect an RF cable from the Antenna Output terminal of the Satellite Receiver to the Antenna Input terminal of the VCR.
- Connect an RF cable from the Antenna Output terminal of the VCR to this set Antenna Input terminal (ℸ).

Scart connections

'Fully wired' Scart Cables should be used for all of the Scart connections.

- The AV2 Scart socket of the VCR must be connected to the VCR Scart socket of the Satellite Receiver.
- The TV Scart socket of the Satellite Receiver must be connected to the AV1 Scart socket of this set.

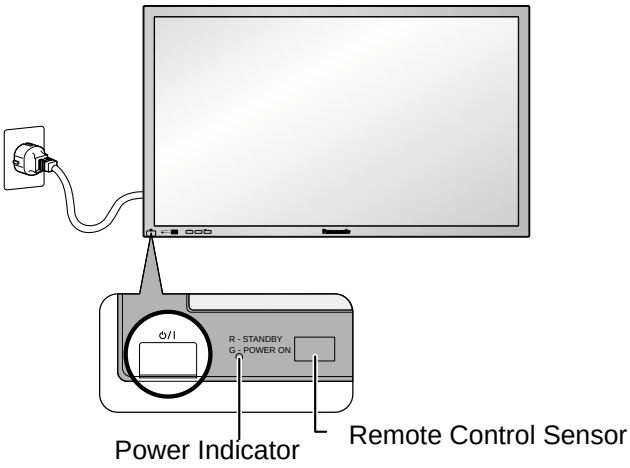
Note:

If using a 'Q-Link' VCR then the AV1 Scart socket of the VCR must be connected to the AV2 Scart socket of this set. If your VCR is not a 'Q-Link' VCR, please consult your VCR operating instruction book.

Notes:

- Additional equipment and cables are not supplied.
- Further details of audio/ video connections can be found on pages 42 and 43.

3. Preparing the Plasma Display (Refer to Operating Instructions of the Plasma Display)

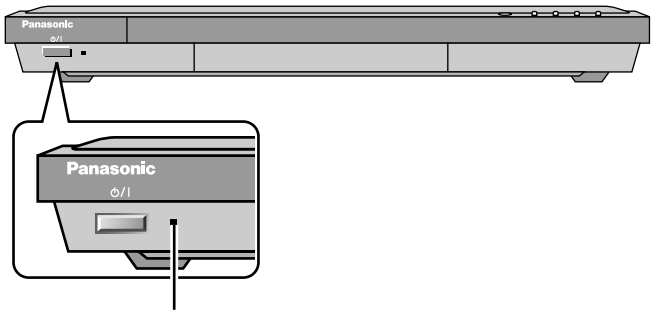


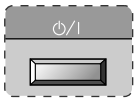
Connecting the plug to the Wall Outlet

Push the Power switch on the Plasma Display to turn the set on Power-On.

Power Indicator: Green

4. Power On/Off





Connecting the plug to the Wall Outlet

Push the Power switch on this set to turn the set on Power-On.

Power Indicator: Green

Example: The screen below is displayed for a while after this set is turned on. (setting condition is an example.)

For VIDEO / COMPONENT / TV INPUT:

Press the POWER button on the remote control to turn this set off.

Power Indicator: Red (standby)

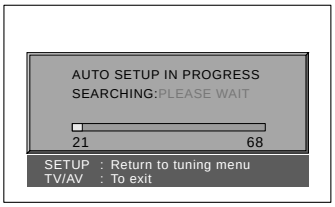
Press the POWER button on the remote control to turn this set on.

Power Indicator: Green

Turn the power to this set off by pressing this power switch on this set, when this set is on or in standby mode.

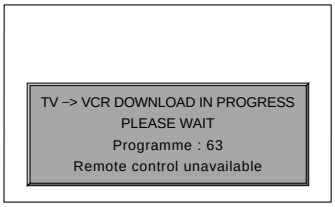
Note:
The Receiver will still consume power as long as the power cord is inserted into the wall outlet.

5. Auto setup



If this set has not been programmed for you then **Auto setup** will begin, your stations will be located, sorted into order and stored ready for use (refer to page 31).

6. This set to VCR download



If a Q-Link, NEXTVIEWLINK or compatible VCR has been connected to the AV2 socket before starting Step 1, programme information will be downloaded to the VCR.

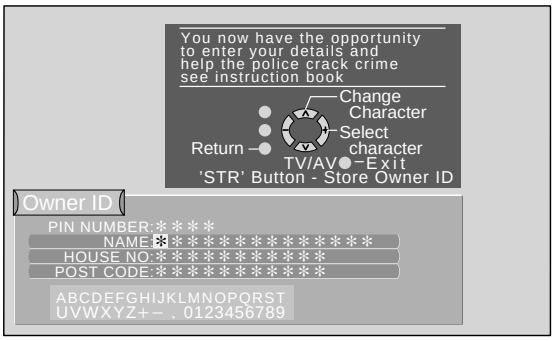
Downloaded tuning data will match the television's.

Not all VCRs support this download of programme information, some may require to be started manually. Refer to the VCR operating instruction book.
If a VCR other than those described above has been connected, then there will be no download operation.

Notes:
If the VCR has not accepted download data from this set, you may need to select the Download option from the VCR's menu system.
Refer to the VCR operating instruction book.
If Q-Link is not operating correctly, check the following:
- The Scart cable is connected to this set's AV2 Scart socket.
- The Scart cable is connected to the VCR's compatible (Q-Link, NEXTVIEWLINK or similar technology) Scart socket.
- The Scart cable is a 'fully wired' type.

For further information on Q-Link and connecting equipment, see pages 9, 10, 11, 36 and 42.
- The sorted programme order depends upon the TV signal, the broadcasting system, and reception conditions. If the order is not to your preference it can be rearranged. Refer to the Programme edit menu - see page 27 for details.

7. Owner ID



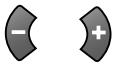
As an added feature, this TV has the option of entering a security code (Owner ID) and personal details into its memory, so that in the unfortunate event of theft it will help the police to trace the owner.

Enter required 4 digit Owner ID **PIN NUMBER** (using 0 to 9 on the remote control)

Press the **TV/AV** button at any time to exit the Owner ID feature without saving any information you may have entered.

Enter NAME, HOUSE NUMBER and POSTCODE

If a 4 digit **PIN NUMBER** was entered above, you will be taken automatically to the **NAME** line.



If not, move to the **NAME** line.

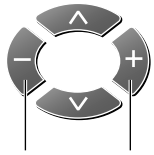
Change character.

Select character position.
Repeat above until **NAME**, **HOUSE NUMBER** and **POSTCODE** are entered.

Press **STR** to store the details
Press **STR** again, when you are asked "Are you sure?"
For further information on Owner ID, including how to view the details you have stored, see page 35.
A space is provided on page 35 to write down your **PIN NUMBER** for future reference.

We recommend that as soon as you have stored Owner ID details (or have exited the feature), the picture controls are reset to normal viewing levels. To do this, press the “N” button, found under the remote control’s pull down flap.

8. The two basic functions



Adjust Volume

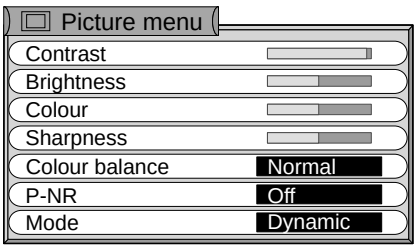
Change Programme

You are now ready to begin viewing programmes.
The cursor controls provide the two basic functions:

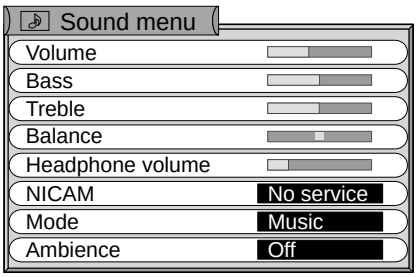
Using the On Screen Displays

Many features available on this set can be accessed via the On Screen Display menu system. Use the remote control as shown below to access and adjust features as desired.

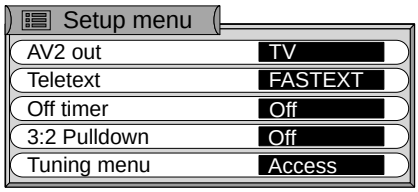
Press to display "**Picture menu**" screen.

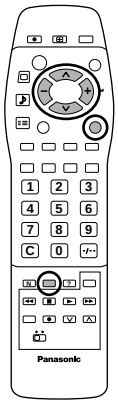


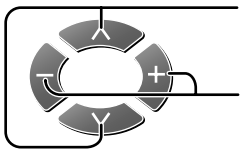
Press to display "**Sound menu**" screen.



Press to display "**Setup menu**" screen.







Press to move the cursor up and down on the menu.

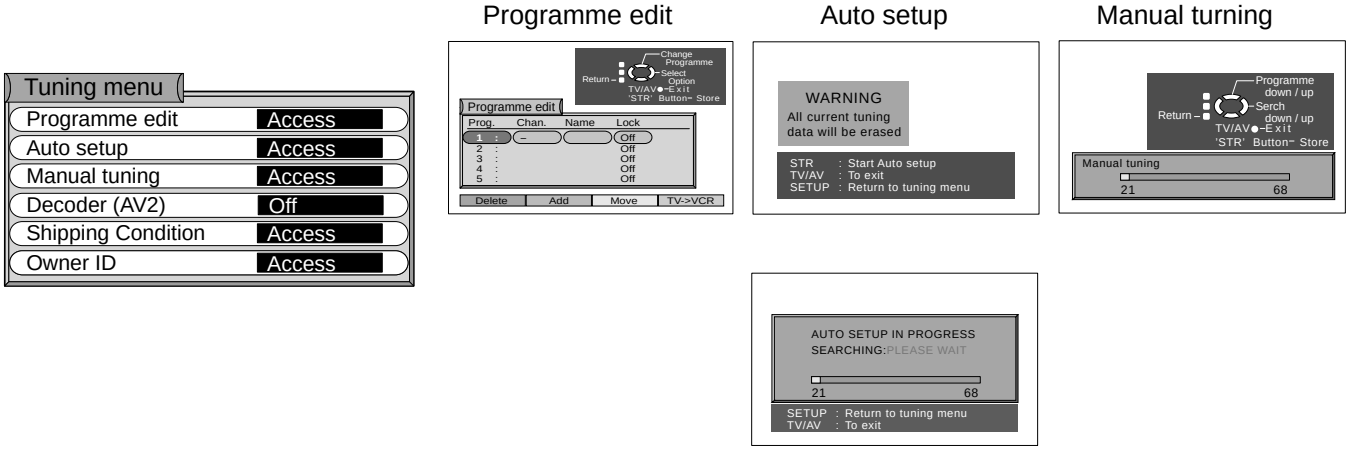
Press to access menus, adjust levels or to select from a range of options.

STR

The **STR** button is used with a number of features to store settings after adjustments have been made or options have been set.

TV/AV

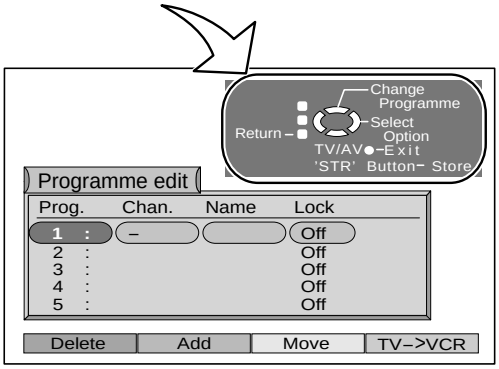
The **TV/AV** button is used to exit the menu system and return to the normal viewing screen.



Please refer to the On Screen Help

An On Screen Help box is displayed whenever a menu is displayed on the TV.
This Help box indicates which buttons on the remote control are used to navigate the menu shown, see above for descriptions of button functions.

ON SCREEN HELP
'Instruction' box



Note:

• If the On Screen Menu is opened in Zoom mode, the screen will be switched into 16:9 aspect ratio. The screen will return to Zoom mode after exiting the On Screen Menu.

Aspect Controls

Press the **ASPECT** ASPECT to move through the seven aspect options: **Panasonic Auto, 16:9, 14:9, 4:3, Zoom1, Zoom2 and Zoom3.**

Notes:
- If you leave Aspect set to Panasonic Auto, this set software determines the best ratio for each programme viewed.In order not to disrupt your viewing, no mode information is displayed while this is happening. Simply press the ASPECT button to display mode information in the top left of the screen.
- The screen modes (16:9/14:9/4:3/Zoom1/Zoom2/Zoom3) are selectable manually.
- During Aspect change, the displayed picture will momentarily disappear. This is not a malfunction.

The on screen selector buttons (corresponding to the two coloured buttons on the remote control) will appear for some Aspect functions and disappear after a few seconds, if you'd like to select an operation when the buttons are not shown, press the **ASPECT** ASPECT button once more and the buttons will reappear.

'WIDE' appears in the top left of the screen if a widescreen identification signal (WSS) is found or a signal is found through a Scart socket.
Panasonic Auto switches to the appropriate **16:9** or **14:9** widescreen ratio.
'Panasonic Auto' appears in the top left of the screen if black stripes above and below the picture are detected. **Panasonic Auto** chooses the best ratio and expands the picture to fill the screen. This process can take several minutes, depending how dark the picture is.

Panasonic Auto

Panasonic Auto determines the best aspect ratio to use to display the picture you are viewing. It does this using a four step process to determine if the picture being viewed is a widescreen picture.

If **Panasonic Auto** detects a widescreen signal it switches into the appropriate **16:9** or letterbox **14:9** mode. The Panorama (Just) mode is selected if a signal with wide aspect ratio is not present (the screen cannot be switched from Panorama mode into 4:3 mode).

The text shown on the screen indicates how **Panasonic Auto** determined which ratio to use:

When in Panasonic Auto mode, if a Letter box signal is input and there is no Aspect information, the picture is automatically adjusted to **Just, Zoom1,** or **Zoom3**.

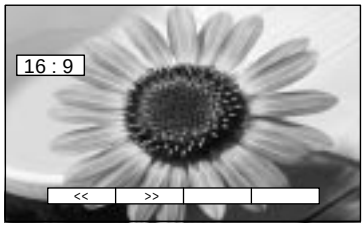
Panasonic Auto
'WIDE' appears in the top left of the screen, **Panasonic Auto** switches to the appropriate 16:9 or 14:9 widescreen ratio.

Panasonic Auto
'Panasonic Auto' appears in the top left of the screen. The best ratio is chosen and the picture expanded to fill the screen.

Notes:
- If, in Panasonic Auto mode, you experience problems with the screen display size when playing back widescreen format recordings from your VCR then it is possible that the tracking control your VCR requires adjustment (your VCR instruction book will contain adjustment details).
- The widescreen aspect ratios of different films and programmes can vary. If these are wider than a standard 16:9 aspect picture then a black band may be visible at the top and bottom of the screen.

16:9

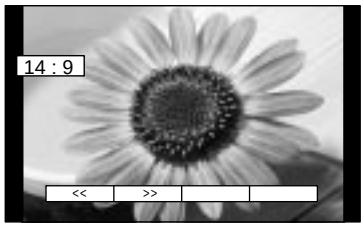
16:9 will display the picture at its maximum size but with slight stretching.



16 : 9

14:9 Letterbox

14:9 will display a 14:9 picture at its standard 14:9, size without any stretching. Gray stripes will be visible down the left and right sides of the picture.



14 : 9

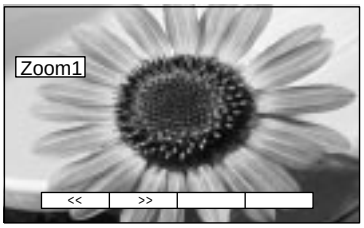
4:3

4:3 will display a 4:3 picture at its standard 4:3 size without any stretching. Gray stripes will be visible down the left and right sides of the picture.

4 : 3

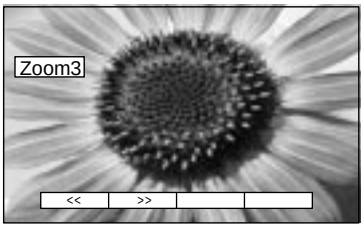
Zoom1, Zoom2, Zoom3

Zoom mode magnifies the central section of the picture.



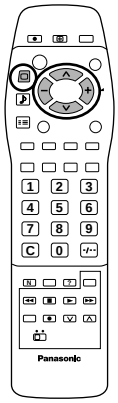
Zoom1

Zoom2



Zoom3

Picture menu



1 PICTURE — Press to display the picture menu screen.

2 Press to select the menu to adjust.

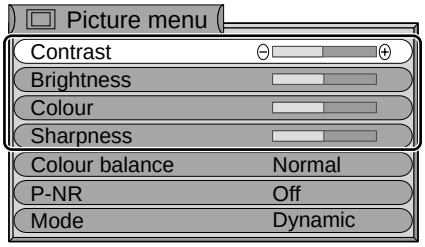
Adjust the desired level by looking at the picture behind the menu.

3 TV/AV — Press to exit from the Picture menu.
This returns the set to the normal viewing condition.

Contrast, Brightness, Colour, Sharpness, Tint

You can change the level of each Function (Contrast, Brightness, colour, Sharpness, Tint) for each picture menu according to your personal preference.

With an NTSC signal source connected to this set, the picture hue can be adjusted to suit your taste.



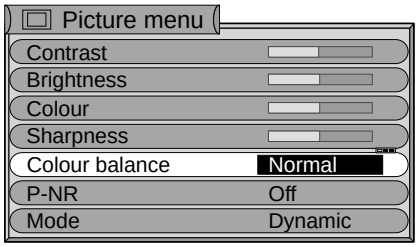
Item	Effect	Function
Contrast	Darker – + Brighter	Adjust for contrast.
Brightness	Less – + More	Adjusts for easier viewing of dark pictures such as night scenes and hair.
Colour	Less – + More	Adjusts slightly to a lighter.
Sharpness	Less – + More	Displays a sharp image.
Tint	Reddish – + Greenish	Adjusts the picture hue.

Notes:
- When this set is receiving NTSC Signals, Tint is displayed and level adjustment is possible.
- Only Contrast will be displayed during TEXT mode.

Colour balance If this Receiver is connected allows you to set the overall colour tone of the picture.

Press – or + to switch between modes.

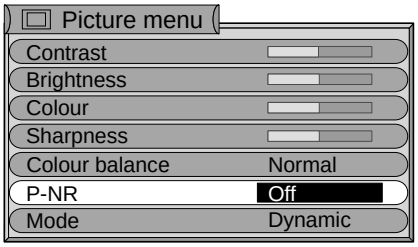
→ Cool ⟷ Normal ⟷ Warm ←



P-NR

This Picture Noise Reduction System (P-NR) is designed to reduce picture noise during poor quality reception conditions.
The P-NR mode will change as below.

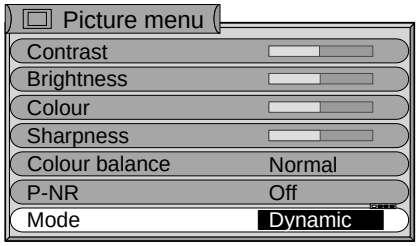
Off ⟷ On



Mode

Picture menu mode will be memorized for each TV, AV mode.

Press − or + to switch between modes



Dynamic ⟷ Normal
Auto ⟷ Cinema

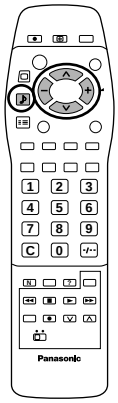
Mode	Function
Dynamic	Displays a bright screen with maximum contrast.
Normal	Displays standard image.
Cinema	Ideal for movies in the dark room.
Auto	Automatically selects the mode that best suits the brightness of the environment.

Notes:
- Auto is available only for SD (Standard Definition) type Plasma Displays (TH-42PW5B, TH-37PW5B and those that will be sold hereafter).
- Auto is not available only for HD (High Definition) type Plasma Displays (TH-50PHW5B, TH-42PHW5B and those that will be sold hereafter).

Helpful Hint (N Normalization)

The 'N' button has no effect if it is pressed when menu is displayed on the screen.
If the 'N' button is pressed when no menu is displayed on the screen, the user-preset original settings will be restored (this is not the factory default settings).

Sound menu



1 SOUND — Press to display the sound menu screen.

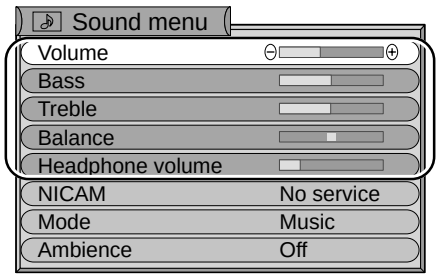
2 Press to select the menu to adjust.

Adjust the desired level by listening to the sound.

Press TV/AV at any time to go back to watching TV.

Some features are only available with the Ambience feature switched off.

Volume, Bass, Treble, Balance, Headphone Volume

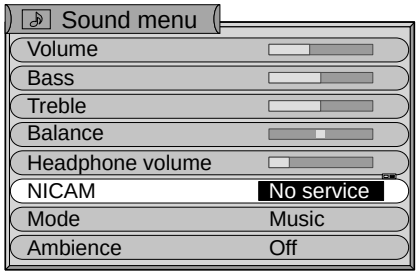


Item	Effect	Function
Volume	Less – + More	Adjusts output volume.
Bass	Less – + More	Adjusts lower deeper sounds.
Treble	Less – + More	Adjusts higher sharper sounds.
Balance	Left SP – + Right SP	Adjusts the sound level difference between left and right speakers.
Headphone volume	Less – + More	Adjusts Headphone volume.

NICAM

Usually set to **stereo** to provide the best reproduction, but if reception deteriorates or if the service is not available then switch to **Mono**. **Mono** (**M1**) and (**M2**) can also be selected if a mono signal is being transmitted.

Not displayed during **AV** mode.



Audio Signal	Receiving Mode	Indications
DUAL	M1 / M2	M1, M2
STEREO	STEREO / MONO	Stereo, Mono
MONO	MONO	No service

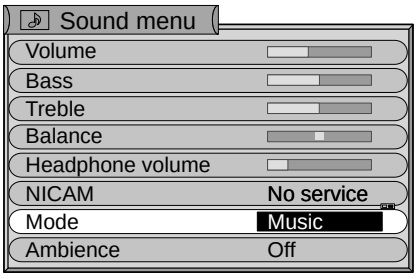
Sound menu

Mode

Sound quality can be improved when watching music or speech by selecting the appropriate mode **Music** or **Speech**.

Press − or + to select Mode.

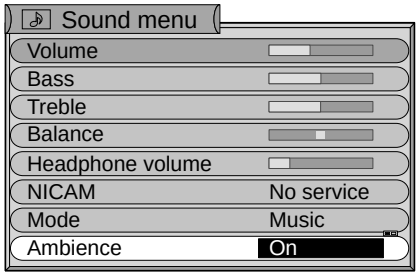
Music ⟷ Speech



Ambience

To enjoy a concert hall effect, turn Ambience to on.

Press − or + to swich between ON and OFF.



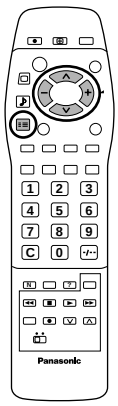
The benefits of Ambience sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.
The Ambience effect can be obtained without the use of external Ambience speakers.

Helpful Hint (N Normalization)

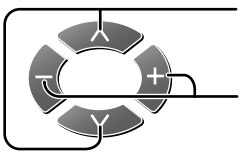
The ‘N’ button has no effect if it is pressed when menu is displayed on the screen.
If the ‘N’ button is pressed when no menu is displayed on the screen, the user-preset original settings will be restored (this is not the factory default settings).

Setup menu

The setup menu provides access to various advanced features and also to the Tuning menu.



1 SET UP — Press to display the setup menu screen.

2  Press to select the menu to adjust.

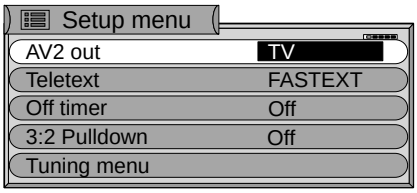
Press to adjust the desired setting.

Press TV/AV at any time to go back to watching TV.

AV2 out

Offers a choice of signals to send to the AV2 Scart socket. You can choose from the current TV programme position, the signal entering AV1, AV3, AV4 or Moniter - the picture displayed on screen.

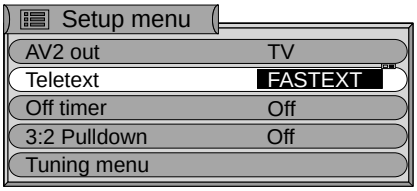
TV ⟷ AV1 ⟷ AV3
Monitor ⟷ AV4



Teletext

Allows you to choose 2 modes. (See page 38)

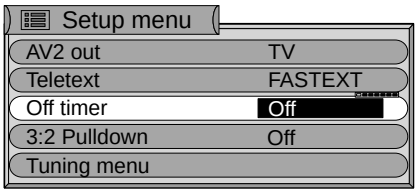
FASTEXT ⟷ List



Off timer

Switches this set off within a preset time which you can choose from OFF and between 15 to 90 minutes in 15 minute intervals.

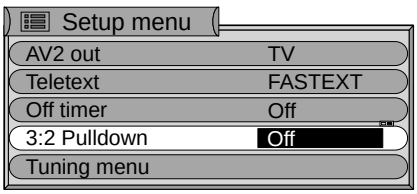
OFF ⟷ 15 ⟷ 30 ⟷ 45
90 ⟷ 75 ⟷ 60



3:2 Pulldown

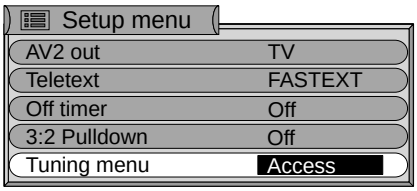
When on, the display attempts to reproduce a more natural interpretation of sources such as movie pictures, which are recorded at 24 frames per second. If the picture is not stable, turn the setting to off.

Off ⟷ On



Tuning menu

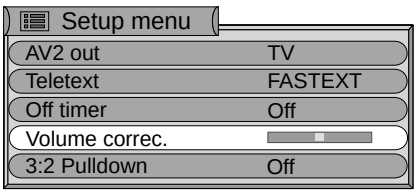
Provides access to many other features including programme edit and Auto setup. (See page 26)
Not displayed during **AV** mode.



Volume correction

During **AV** mode, Volume correction is displayed.

Lets you adjust the volume level of individual station. Use this feature if the volume level varies significantly between stations. Adjusting one station's volume to bring it into line with the other stations means you can avoid having to adjust the volume each time you change channels.



Tuning menu

Tuning menu overview

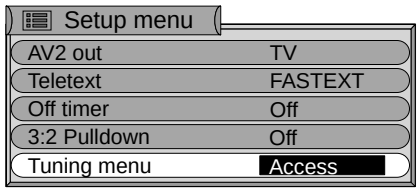
1 Press SET UP.

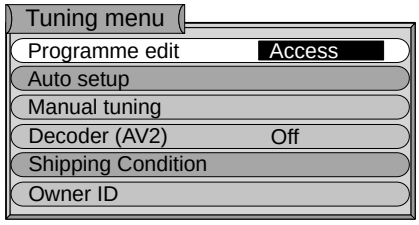
2 Move to the Tuning menu option by using ∧ or ∨.

3 Access Tuning menu by using − or +.

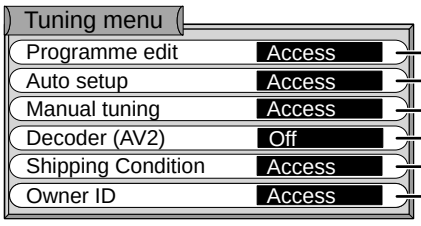
4 Move to chosen menu option by using ∧ or ∨.

5 Adjust chosen option or access chosen menu by using − or +.





Press TV/AV at any time to go back to watching TV.



Access in order to customise your programme settings (see page 27). (eg: adding or deleting a programme position.)

Allows you to automatically retune this set. Useful if you move house and wish to retune your set to the local stations (see page 31).

Allows individual programme positions to be tuned manually (see page 32).

Lets you change the recording source on DIRECT TV REC (see page 36).

Allows you to clear all tuning information and reset all control levels back to factory setting (see page 34).

Allows you to enter a security code and address information (see page 35).

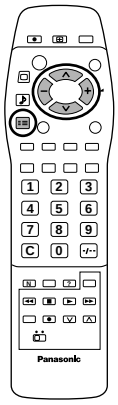
Pressing STR after having adjusted some feature will store the setting as the default (replacing the factory setting).

Programme edit

Use this setting when changing setting of receiving channels or changing the channel display.
Turn this set and select the broadcast channel. Follow the steps below to display the Programme edit screen.

Selecting the Programme edit on the Tuning menu.

Access to the Programme edit screen



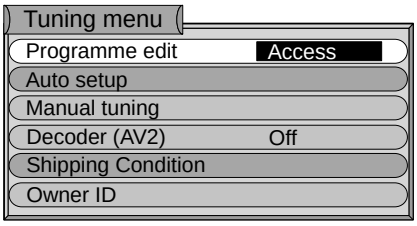
1 SET UP — Press to display the Setup menu screen.

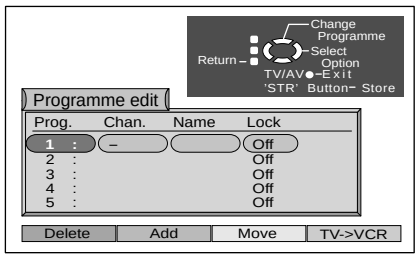
2 Press to select the Tuning menu.

Press to access the Tuning menu screen.

3 Press to select the Programme edit.

Press to access the Programme edit screen.

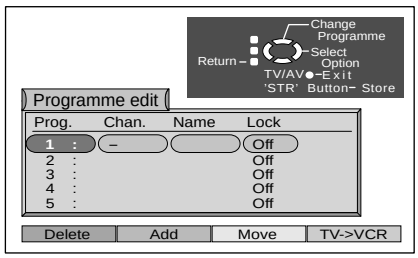




Programme edit

1 Press to select the Programme position.

Press to select the Prog., Name, Lock.

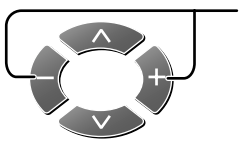


Note:
- When the cursor enters the Name field, it will move character-by-character up to five before moving to the next field.

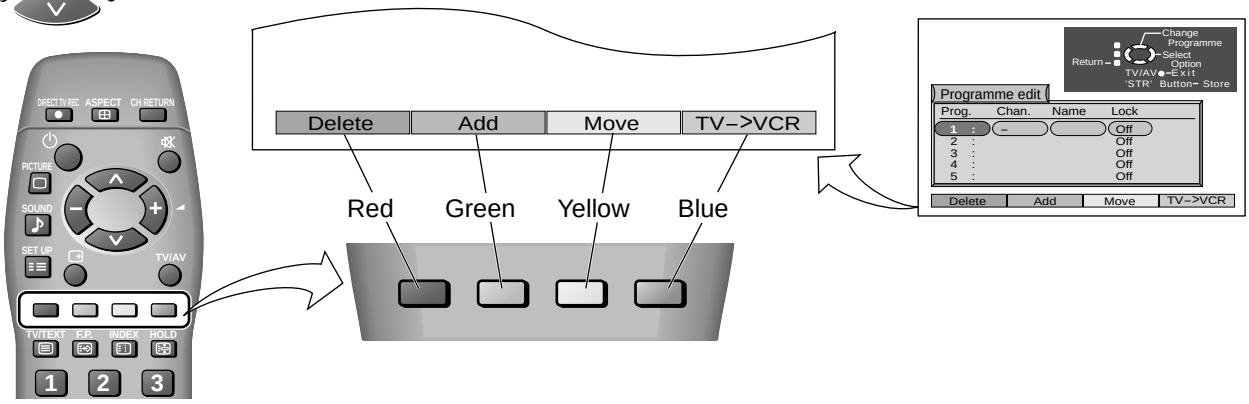
2 The buttons function in accordance with the position of the cursor: Prog., Name or Lock.

Cursor position	Function of ∧ ∨ buttons
Prog.	Moves the Programme position. Red, Green, Yellow, and Blue Bars are displayed at the bottom of the screen. These have the same functions as the Red, Green, Yellow, and Blue buttons on the remote control. (see next page)
Chan.	Sets the number of channels to be displayed.
Name	The characters that can be input are displayed at the bottom of the screen. Select the characters required and input.
Lock	Turns the channel Lock On and Off. (When receiving a channel while Lock On is selected, the volume will be muted and the screen be black and display ”Programme is locked”.

Deleting, Adding and Moving a programme channel

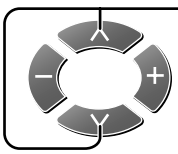


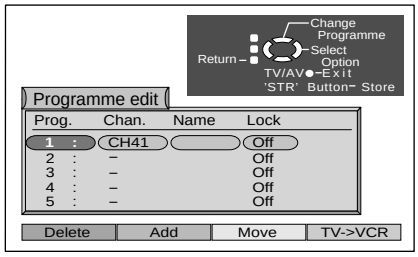
Make sure the cursor is in the **Prog**. column.
Red, Green, Yellow, and Blue Bars are displayed at the bottom of the screen. These have the same functions as the Red, Green, Yellow, and Blue buttons on the remote control.



To delete an unwanted programme position

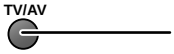
1 Ensure that the cursor is in the Prog. Column.

2  Choose the programme position.

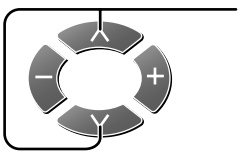


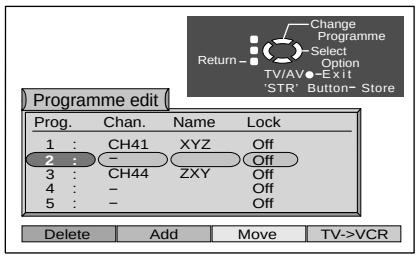
3 Press the Red button on remote control.

4 Press the Red button again to confirm.

5  If you have finished in the Programme edit menu, press the TV/AV button to exit.

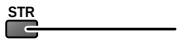
To add a programme position

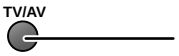
1  Choose the programme position where the new programme is to be inserted.



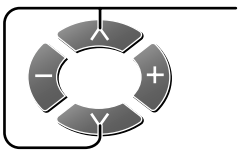
2 Press the Green button.

3 Press the Green button again to confirm.

4  Press STR to store.

5  If you have finished in the Programme edit menu, press the TV/AV button to exit.

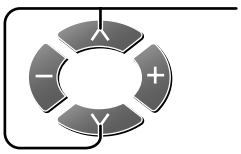
To move a programme to another position

1 

Choose the programme position to be moved.

2

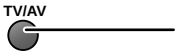
Press the Yellow button on remote control.

3 

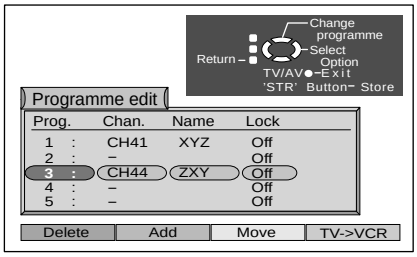
Choose new positon.

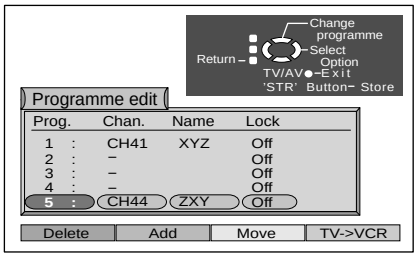
4

Press the Yellow button again to confirm.

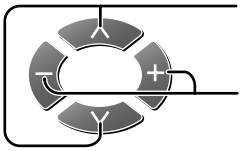
5 

If you have finished in the Programme edit menu, press the TV/AV button to exit.



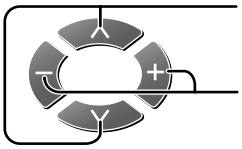


To rename a programme position

1 

Choose the programme position.

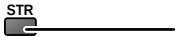
Move to the Name column.

2 

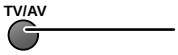
Choose the new character.

Move to the next character position.

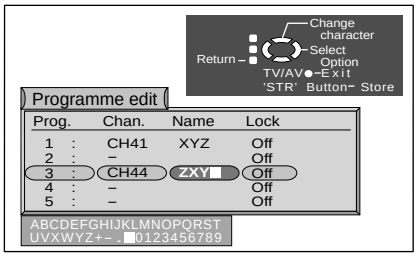
3 Continue until renaming is done.

4 

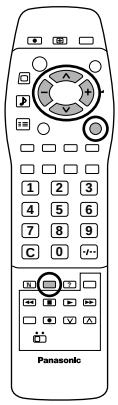
Press STR to store.

5 

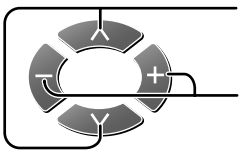
If you have finished in the Programme edit menu, press the TV/AV button to exit.



To lock a programme position to prevent access

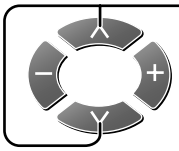


1 Choose the programme position to be moved.

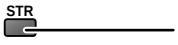


Move to the lock column.

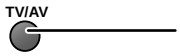
2 Choose between lock On or lock Off.

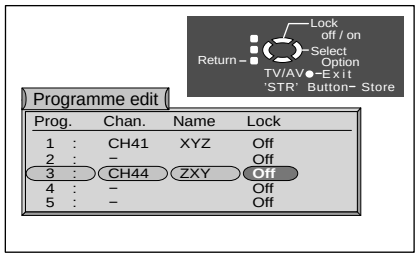


3 Press STR to store.



4 If you have finished in the Programme edit menu, press the TV/AV button to exit.





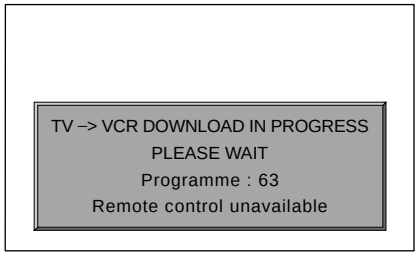
Note:

- When a programme position is locked, Direct Channel Access using the 'C' and numeric buttons on the remote control is not available.

To copy programme information to a VCR

You can copy programme information to a compatible VCR connected to AV2 (see page 42 for connection information)

Press the blue button.
Programme data will now be sent to the VCR. This might take a few seconds, depending on the number of stations stored. If the message "Unable to download, check your VCR" appears on the screen, the television is unable to send the programme information to the VCR. See the VCR instruction book for further information.



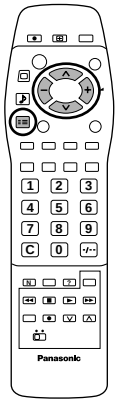
Note:

- If you have a Q-Link VCR, ensure that it is in **Stand-by** mode. If your VCR is not a Q-Link VCR, please refer to the VCR instruction book.

Auto setup

Automatically scans all TV channels and stores them in memory.
Auto setup automatically retunes your set. This feature is useful, if for example, you move house and wish to retune your set to receive the local stations.

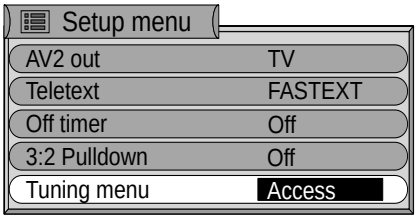
Display the Tuning menu screen



1 SET UP — Open the setup menu.

2 Move to Tuning menu.

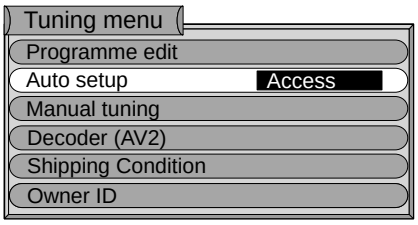
Access Tuning menu.



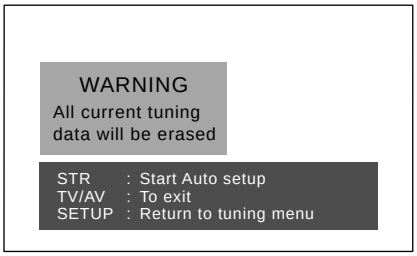
Auto setup tuning

1 Move to Auto setup.

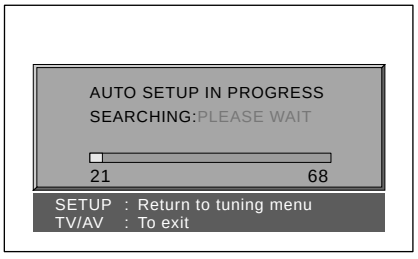
Access Auto setup.



2 Press to start Auto setup tuning, then the Searching screen will be displayed.



When Searching is complete the screen will return to the Turning menu screen.
The best tuning position is automatically memorized.



Once this operation is completed the TV will display programme position 1.

Notes:
- If you proceed with the next step all tuning data will be erased (all stations and their programme positions stored in your set's memory will be wiped out so the new settings can be stored).
- If an auto setup process is aborted midway, all channels that have been set up to that point will be saved to memory.

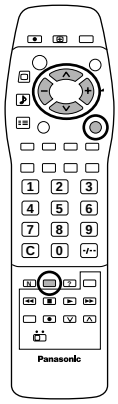
3 TV/AV — Press to exit from the Tuning Menu.
This returns the set to the normal viewing condition.

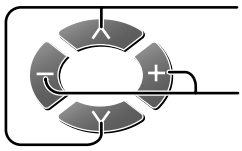
Manual Tuning

Manual tuning of the programme position is available either from the On Screen Display menu or from the front panel controls.
Turn this set on and select the broadcast channel. Follow the step on the previous page to display the Tuning menu screen.

(From the On screen Display menu)

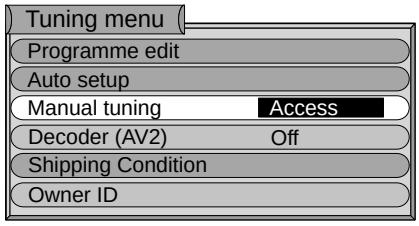
It is possible on individual programme position.

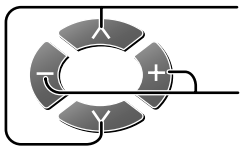


1 

Press to select the Manual tuning.

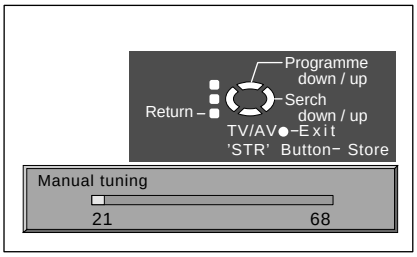
Press to access the Manual tuning screen.



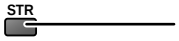
2 

Press to select the desired Programme Number.

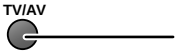
Press to search the higher or lower channel.



Search Start.

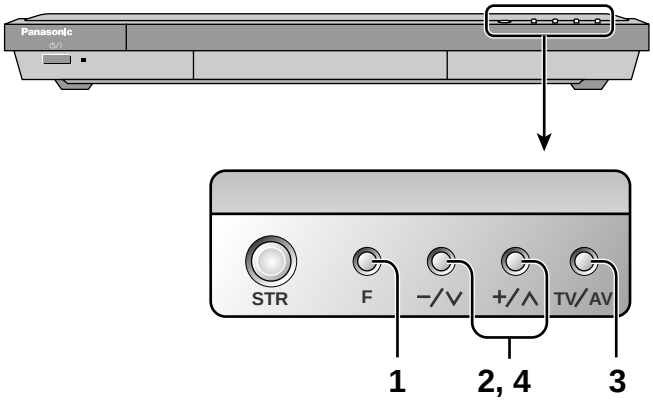
3 

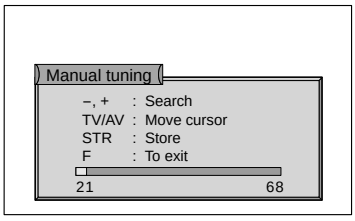
When the desired station is found, press to store.
The programme position will flash.

4 

Press to exit from the Tuning Menu. This returns the set to the normal viewing condition.

(Via Top panel)





1 Press F (Top panel) until Tuning mode is reached.

2 Press –/∨ or +/∧ to access Tuning mode.

3 Press TV/AV to move between Change programme, search and TV system.

4 Press –/∨ or +/∧ to change programme position or start search.

When the desired station is found, press STR to store.

The programme position will flash.

Repeat above procedure to tune additional programme positions.

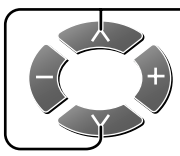
Press F at any time to exit the Tuning menu.

Helpful Hint

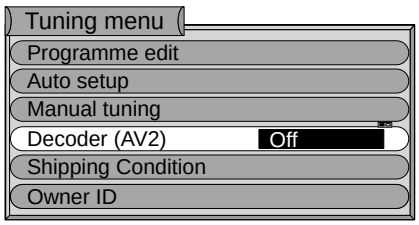
When using a VCR without video and audio input/output terminals, it is convenient to connect the aerial cable as indicated in the instruction manual of VCR and to set the designated channel to programme No. '0'.
Further, in multi-system VCR, it is more convenient to set the designated channel to several programme Numbers.

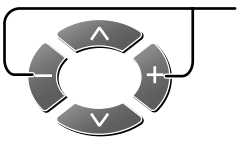
Decoder (AV2)

If a Q-link compatible VCR is connected to AV2 and is ready to record, the recording source for DIRECT TV REC will change on selecting the Decoder (AV2) 'On' or 'Off' using the remote control.

1 

Press to select the Decoder (AV2) on tuning menu screen.



2 

Press to select On or Off.

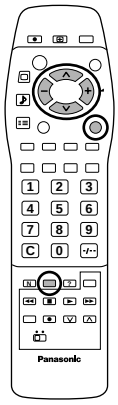
On ⟷ Off

Decoder (AV2) On : VCR records the External Input signal.

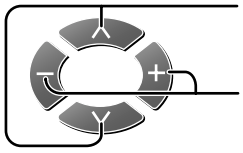
Decoder (AV2) Off : VCR records the Programme signal from its own tuner.

Shipping condition

Shipping condition allows you to reset the set to its original condition, i.e. no channels tuned in.
This is useful, for example, if you move to a different area when you will probably want the TV to tune itself to your new local stations.
This can be done either through the Shipping condition menu or through the Auto setup menu.
The Shipping condition menu will reset all data, clearing all tuning information and resetting all control levels back to factry settings. You may need to adjust your VCR or programme position ‘0’ VCR after operating the Shipping condition menu. (refer to page 37)

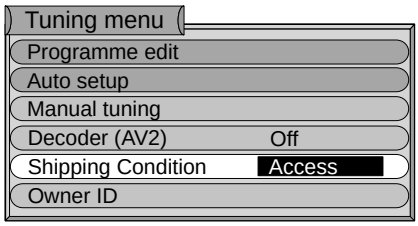


1

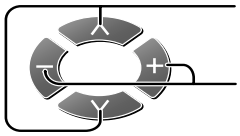


Press to select the Tuning menu.

Press to access to tuning menu.



2



Press to select the Shipping condition.

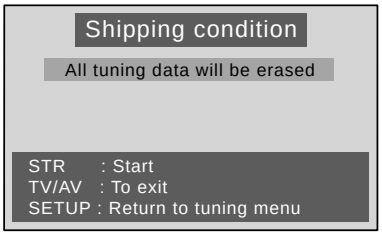
Press to access to shipping condition.

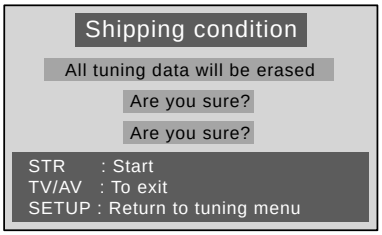
3 STR — Press to start.

4 STR — Press again to comfirm each time that you are asked “Are you sure ?”

5 STR — Swich TV off and wait for a few seconds.
Swich TV on again.
Auto setup will begin stations will be located, sorted and stored ready for use (see page 31).

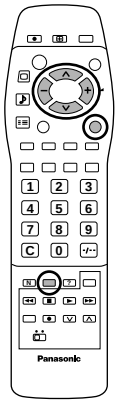
6 TV/AV — Press to at any time to go back to watching TV.





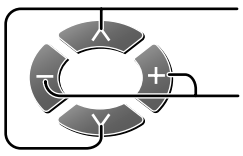
Owner ID

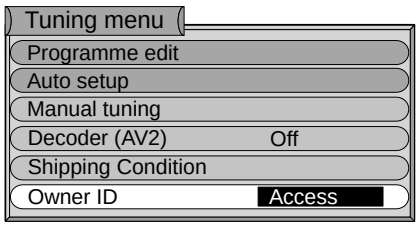
Owner ID allows you to enter a security code and adress information so that in the unfortunate event of theft it will help the Police to determine the owner.
If the Owner ID information was not entered after Auto setup or it is necessary to alter some of the ID information it can be re-accessed via the Tuning menu.



1 Press to select the Tuning menu.

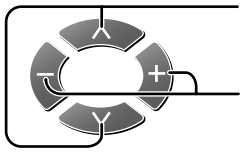
Press to access to tuning menu.

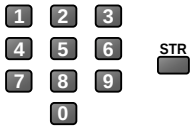




2 Press to select the Owner ID.

Press to access to Owner ID.

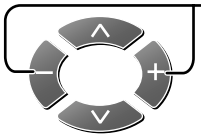


3 

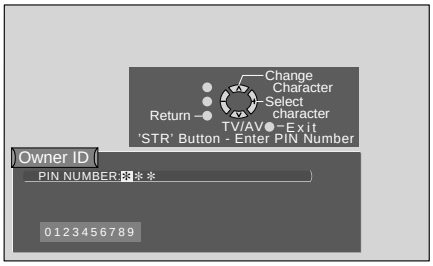
If Owner ID has previously been set, enter the PIN NUMBER (using 0 to 9 on the remote control) followed by STR to proceed, this will take you to the NAME option.

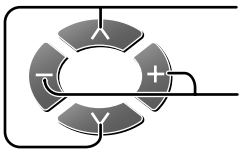
4

If no Owner ID has previously been set, enter the required 4 digit Owner ID PIN NUMBER (using 0 to 9 on the remote control).
If a 4 digit PIN NUMBER was entered above, you will be taken automatically to the NAME line.

5 

If not, move to the NAME line.

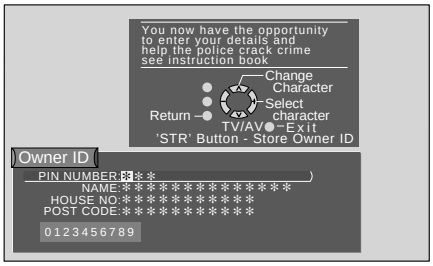


6 

Press to the change character.

Press to select the character position.

Repeat above until NAME, HOUSE NUMBER and POSTCODE are entered.



7 STR

Press STR to store the details.

8 STR

Press again, to confirm, when asked, “Are you sure?” The Tuning menu will be displayed.

9 TV/AV

Press the TV/AV button to exit.

For future reference,
write your **PIN NUMBER** here :

____ ____ ____ ____

N

We recommend that as soon as you have stored Owner ID details (or have exited the feature), the picture controls are reset to normal viewing levels. To do this, press the “N” button, found under the remote control’s pull down flap.

Note:

• If you lose or forget your PIN number, contact your nearest Panasonic Dealer for advice.

Q-Link

This is a **Q-Link** TV. Q-Link, NEXTVIEWLINK and similar technology provide a way for the set and VCR to communicate, making it easier to record programmes. In order to be able to exchange information both the set and the VCR must be fitted with this technology, and must be connected with a SCART lead (full function type) between the AV2 socket of this set and the appropriate socket on the VCR (see the VCR instruction book for details).

Q-Link lets your set instruct a **compatible VCR** to record the programme currently shown on screen, no matter what programme position is set on the VCR.

Press the DIRECT TV REC button.

Notes:
- If the VCR is in Stand-by mode, it will automatically switch on when you press the DIRECT TV REC button.
- To ensure correct recordings are made, the set and VCR should share tuning information (see page 30).
- Whenever the Auto setup function is used, tuning data will be downloaded to the VCR (see page 31).

A message, sent from the VCR, will appear on screen showing what is being recorded, or if it is not possible to record. Some “Q-Link” compatible VCR’s only display the message when on the VCR programme position (0) or in AV mode. See the VCR instruction book.

VCR recording preset prog	VCR is recording the programme signal from its own tuner. If you wish you can switch off this set and leave the VCR recording in the normal way.
VCR recording TV source	VCR is recording the programme signal from this set. You must not change programme position or switch off this set: if you do, the VCR will automatically stop recording and switch off.
No recording - TAPE IS PROTECTED	The write protection tab on the back of the cassette has been removed.

Examples of other messages that might be displayed.

No recording - NO TAPE **No recording TAPE MAY BE DAMAGED**

Preset Download

This allows the programme order from this set to be downloaded to the VCR, this helps to ensure that correct recordings are made, there are several ways to perform this operation:
- During installation as explained in the ‘Quick Start Guide’ beginning on page 9.
- When Auto setup is started from within the Tuning menu, see page 31.
- When this set to VCR manual download is started from within ‘Programme edit’, see page 30.
- Preset download started from the VCR, refer to the VCR operating instruction book.

Notes:
- With Panasonic Q-Link VCR’s these additional features are available:
- If you insert a tape in the VCR and press the Play button whilst this set is in ‘Stand-by’ mode, this set will automatically switch On and select the AV2 input so that you can view the tape.
- When this set is switched into ‘Stand-by’ mode, the VCR will also switch into ‘Stand-by’ mode if there is no tape in the VCR, or if there is a tape in and the VCR is in ‘Rewind’ or ‘Stop’ mode (if the VCR is rewinding a tape, it will not switch into ‘Stand-by’ mode until rewinding has finished).
- If this set is in Stand-by mode and the VCR sends a menu to be displayed on this set screen (e.g. Main menu), this set will automatically switch On and the menu will be displayed.
- Not all VCR’s support this technology. This set will communicate with VCR’s bearing the following logos:
- “DATA LOGIC” (a trademark of Metz Corporation)
- “Easy Link” (a trademark of Philips Corporation)
- “Megalogic” (a trademark of Grundig Corporation)
- “SMARTLINK” (a trademark of Sony Corporation)

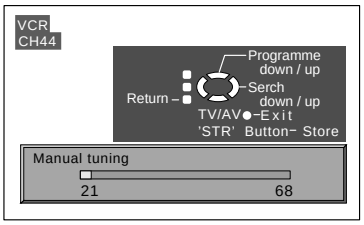
Some may support certain features, but not others. Refer to the VCR operating instruction book.
- If Q-Link is inoperative, first confirm that your Scart lead is a full function type. Ask your dealer for further details.

Tuning your VCR and satellite receiver

Your new set is supplied with programme position ‘0’ set to receive an RF signal from your VCR, although a Scart connection is preferable if the VCR is so equipped (see page 10, 11 or 42 for suitable inputs to the Scart socket on this set.)
However, if for some reason your VCR is tuned to a different RF channel then you will not receive any picture or sound from your VCR on programme position ‘0’ of this set. Either adjust the tuning of this set’s programme position ‘0’ (follow the instructions below) or adjust the RF channel of your VCR (some VCR’s allow adjustment of their RF channel via their remote control unit) or both until the Television receives the RF output channel of your VCR.
It is intended that this advice is used in conjunction with the instruction books for your additional equipment.

Tuning your Receiver to the VCR.

Switch on the VCR, insert and play a pre-recorded tape with known content.



The tape with known content is found and displayed. Pressing STR will store the setting.

1 Press SET UP.

2 Move to chosen Tuning menu option by using ^ or v.

3 Access Tuning menu by using – or +.

4 Move to chosen Manual tuning by using ^ or v.

5 Access Manual tuning by using – or +.

6 Select programme position ‘0’ VCR by using ^ or v.

7 Start searching for the VCR playback of the known content tape by using – or +.

When the VCR playback is found, press STR to store.

Pressing TV/AV to exit.

Notes:
- If picture patterning occurs on programme position ‘0’ it may be necessary to adjust the RF output channel of the VCR, refer to the VCR instruction book.
- If a Satellite Receiver and a VCR are going to be used with RF cable connections it is important to avoid both units being set on the same channel.
  Refer to the Satellite Receiver and VCR instruction books for precise tuning information.

Advanced Remote Control Operation

VCR / DVD Operation

The Remote Control is capable of operating some functions of selected Panasonic VCR's and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions, so to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.

Button		Function
1		**Standby** Press to switch the VCR or DVD to standby mode. Press again to switch back on.
2		**VCR / DVD switch** Use this switch to select whether controls operate DVD equipment or your VCR.
3		**Play** Press to playback the tape or DVD.
4		**Stop** Press to stop the tape or DVD.
5		**Skip / Fast Forward / Cue** VCR: Press to fast forward the tape. In Play mode, press to view the picture rapidly forward (Cue). DVD: Press once to skip to the next track.
6		**Skip / Rewind / Review** VCR: Press to rewind the tape. In Play mode, press to view the picture rapidly in reverse (Review). DVD: Press once to skip to the previous track.
7		**Pause / Still** Press in playback mode, the picture will pause. Press again to restart play.
8	PROGRAMME	**Programme Up / Down** Press to increase or decrease the VCR programme position by one.
9	REC	**Record** Press this button to start recording.

TELETEXT

· Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.

· Pressing the Picture button whilst in Teletext operation will display the contrast function with a cyan bar, press − or + to alter the setting as required.

· Pressing the Setup button whilst in Teletext operation will display special function options at the bottom of the screen.

· When in Teletext mode, the volume may still be altered to the desired listening level after pressing SOUND or MUTE button.

What is List mode?
In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in this set's memory.

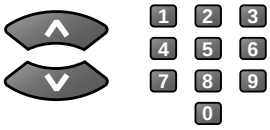
What is FASTEXT?
In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

Note:
• When watching TV in 4:3 or zoom mode, pressing TV/TEXT button will display teletext page momentarily in that aspect before switching to normal teletext picture size.

TV/TEXT

TV / Teletext mode

Press TV/TEXT to switch between the current programme and teletext mode.



Page Selection
Pages can be selected in two ways:
a. Press ∧ or ∨ to increase or decrease the page number by one.
b. By entering the page number, using 0 -9 on the remote control.

SET UP

Green

Full / Top / Bottom

Press SET UP to display special functions, followed by the **Green** button.
Press the **Green** button again to expand the BOTTOM half.
Press again to return to normal (FULL) size.

SET UP

Red

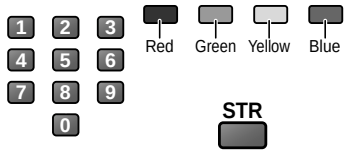
Reveal

Press SET UP to display special functions, followed by the **Red** button to reveal hidden words e.g. quiz page answers. Press again to hide.

Red Green Yellow Blue

Red / Green / Yellow / Blue buttons
In Top mode they correspond to the differently coloured subjects.
In List mode they correspond to the differently coloured page numbers.

It is not possible to change the programme position when in News flash, Update or Sub Coded Page Access operation.



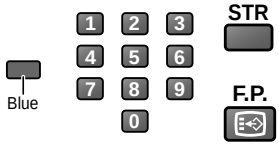
List Store

In List mode the four page numbers can be altered (programme positions 1 - 25 only). To do this, press one of the four coloured buttons and enter the new page number. Press and hold STR, the page number will change to white indicating that the page is stored.

Hold

Press HOLD to hold the Teletext page when viewing multi-page information.

Press again to return to automatic page update.



Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, this set must be in List mode, and the programme position must be from 1 - 25.
Press the **Blue** button, select the page number, then press and hold STR.
The page number is now stored.
Press F.P. to recall this page.

Update Display

Press SET UP to display special functions, followed by the **Yellow** button to view the TV picture whilst searching for a Teletext page.
When found, the screen will display the page number at the top left.
Press the **Yellow** button to view the page.
Press TV/TEXT to return to normal TV operation.

News Flash

When a news flash page has been selected, press SET UP, **Yellow**, to view the TV picture. When an update is received, the page number will be displayed on screen.
Press the **Yellow** button to display the News Flash.
Press TV/TEXT to return to normal TV operation.

Update

Press SET UP, **Yellow** to see the update of information on certain pages.
When an update is received, the page number will be displayed at the top left of the screen.
Press the **Yellow** button to view the page.
Press TV/TEXT to return to normal TV operation.

Index

When in FASTEXT operation

Press INDEX to return to the main index page.
Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

Sub Coded Page Access

When Teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. It is possible to enter your required sub page and continue watching the normal programme until the correct sub page is found.

Select the required page number using buttons 0 - 9.

If the top of the page indicates that sub pages are being transmitted yet the page does not change, then the number at the top of the page is there to indicate that the broadcaster has updated the page's contents, there are no sub pages.

Press SET UP followed by the **Blue** button; T∗∗∗∗ will be displayed at the top right of the screen.

Enter desired sub page number before the T∗∗∗∗ disappears. To select page 6 enter 0, 0, 0 and 6.

(If in List mode, a ‘T’ will appear in the current box at the bottom).

Press the Yellow button to view a normal TV programme.

(Press SET UP **, Yellow** in List mode).

When the page is available, press the **Yellow** button to view the page.

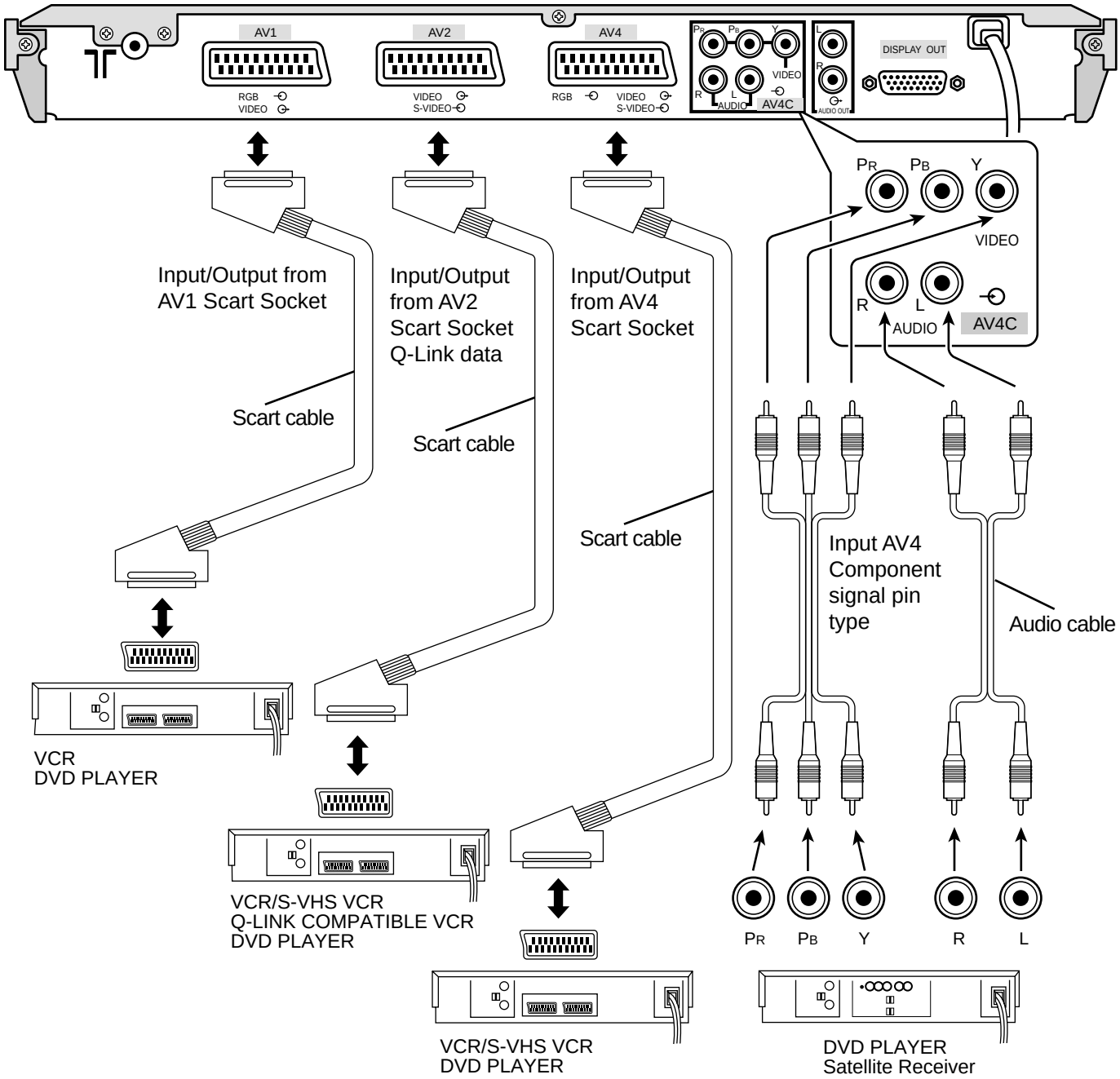
To clear the page perform one of the following:

- Press SET UP.
- Select a new page number.
- Press TV/TEXT to return to normal TV operation.

Connections

How to connect the Input/Output terminals

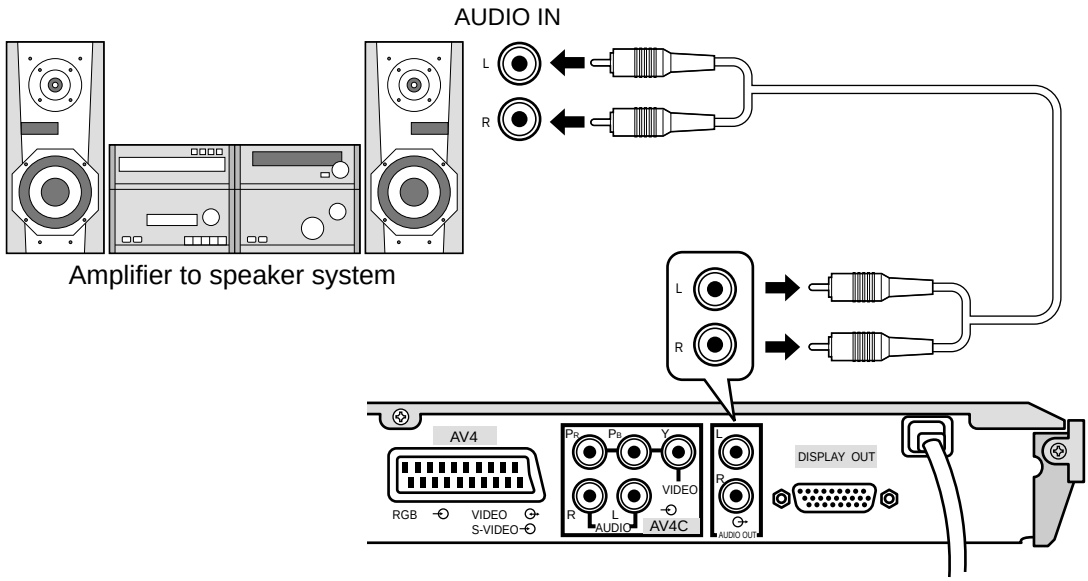
Connects VCRs and other peripheral equipment



Notes:

- Additional equipment and cables shown are not supplied with this set.
- When a monaural VCR is used, connect the monaural audio cable to the AUDIO-L (Left) terminal.
- Do not connect a computer with TTL output (5V) to this set.
- The AV2 21 pin socket can also be used as an output to Audio/Video equipment. (see page 10)
- Select the desired VIDEO input position by pushing the TV/AV button. (see page 6, 7)
- For Scart socket wiring information see page 45.
- When cables are connected to the Component input terminals, the AV4 Scart terminal is automatically switched to Component signal input. If it is required to use AV4 as a Scart terminal, remove the cables from the Component terminals.

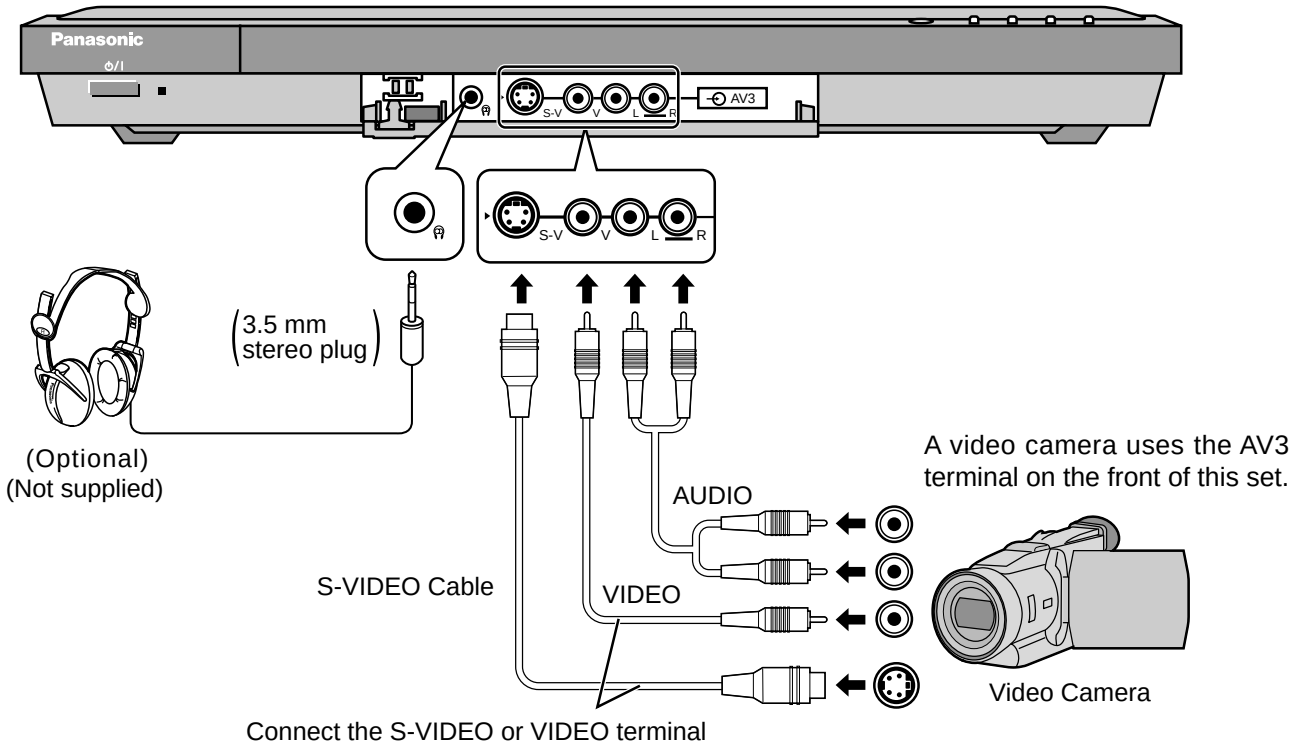
How to connect the AUDIO OUT terminals



Notes:
- The AUDIO OUT terminal provides a fixed level output only.
  (The menu settings and remote control volume controls have no effect.)
- Additional equipment and cables shown are not supplied with this set.

How to connect the Headphones / Earphones /AV3 terminals

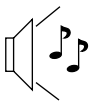
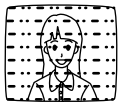
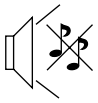
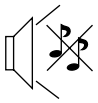
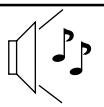
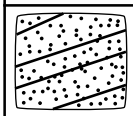
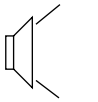
Connect headphones / earphones, and AV3 terminals as follows.



Notes:
- The volume level of the headphones can be adjusted by selecting “Headphone Volume” from the Sound menu.
- Additional equipment and cables shown are not supplied with this set.

Troubleshooting

If there is a problem with your set please refer to the table below to determine the symptoms, then carry out the suggested check. If this does not solve the problem, please contact your local Panasonic dealer, quoting the model number and serial number (both found on the rear of this set).

Symptoms		Checks
Picture	**Sound**	
Snowy Picture	Noisy Sound	Aerial location, direction or connection
Multiple Image	 Normal Sound	Aerial location, direction or connection
 Interference	Noisy Sound	Electrical appliances Cars/Motorcycles Fluorescent lights
Normal Picture	 No Sound	Volume level Sound mute switched on
No Picture	 No Sound	This set to AV mode Not plugged into A.C. outlet Not switched on Picture / Sound controls set at minimum levels Check if in stand-by mode
No Colour	 Normal Sound	Colour Controls set at minimum levels
 Poor or Distorted Picture	 Weak or No Sound	Retune Channel (s)
Normal Picture	Weak or distorted sound	Sound reception may have deteriorated. Switch NICAM setting (Sound menu) to Off until reception improves.

For your Guidance

Service
Before requesting service, please refer to the troubleshooting guide on previous page to determine the symptoms. To obtain service please contact your local Panasonic dealer quoting the model number and serial number (both are located at the rear of this set).

Sleep Feature
If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes, This function wil not operate when this set is in AV mode.

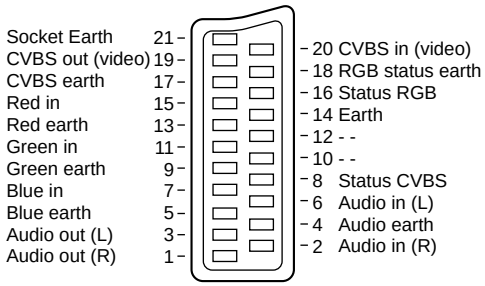
Last position Memory
Certain functions have a last position memory, i.e. the setting at the time of switch - off will be the setting used when this set is switched on again:

Programme	Contrast
Headphone volume	Aspect
AV position	Picture
Volume	Standby
NICAM	Brightness
Bass	Colour
Treble	Colour balance
Status	P-NR
Teletext mode	Volume correction
3:2 Pulldown	(in AV mode only)
Tint	Mode of Sound
(M.NTSC/NTSC only)	Mode of Picture

Pin Assignment

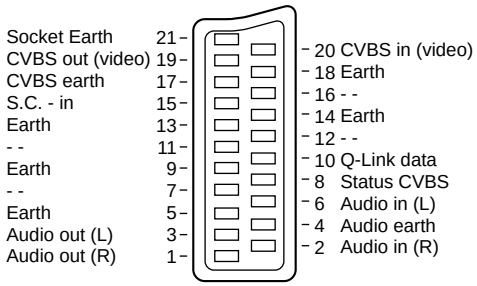
Scart and S-VIDEO socket information

AV1 Scart socket (RGB, VIDEO)



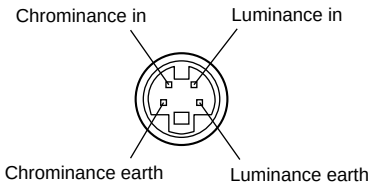
Suitable inputs for AV1 include
RGB (Red / Green / Blue).

AV2 Scart socket (S-VIDEO, Q-Link)

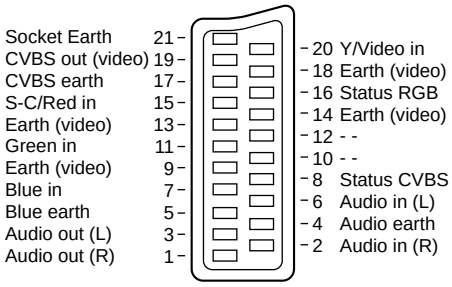


AV2 - Pins 15 and 20 are dependent
on AV2 S-VHS / VIDEO switching.

AV3 S-VIDEO 4 pin socket



AV4 Scart socket (RGB, S-VIDEO)



Suitable inputs for AV4 include
RGB (Red / Green / Blue).
AV4 - Pins 15 and 20 are dependent
on AV4 S-VHS / VIDEO switching.

Specifications

Power Source	220 V - 240 V 50 Hz A.C.	
Power Consumption		
Average	24 W	
Stand-by	3 W	
Power-OFF	0 W	
Receiving Systems/ Band name	**PAL I** **PAL 525/60** Playback of NTSC tape from some PAL video recorders (VCR) **M.NTSC** Playback from M.NTSC Videorecorders (VCR) **NTSC** Playback from NTSC Videorecorders (VCR) (AV INPUT ONLY)	
OUTPUT		
DISPLAY OUT	D-SUB 26-pin	
AUDIO OUT	AUDIO L-R (Pin Jack Type × 2)	0.5 Vrms
INPUT		
AV3-Front	VIDEO (Pin Jack Type)	1.0 Vp-p (75 Ω)
	S-VIDEO (MINI DIN 4-pin)	Y:1.0 Vp-p (75 Ω) C:0.286 Vp-p (75 Ω)
	AUDIO L-R (Pin Jack Type × 2)	0.5 Vrms
AV4C-Rear	Y	1.0 Vp-p (including synchronization)
	P_B/P_R	±0.35 Vp-p
	AUDIO L-R (Pin Jack Type × 2)	0.5 Vrms
INPUT/OUTPUT		
AV1-Rear	21 Pin socket (Audio/Video in, TV out, RGB in)	
AV2-Rear	21 Pin socket (Audio/Video in, Audio/Video out, S-Video in, Q-Link)	
AV4-Rear	21 Pin socket (Audio/Video in, TV out, S-Video in, RGB in)	
ANT-Rear	UHF	
Operating Conditions	Temperature : 34 °F - 104 °F (0 ° – 40 °C) Humidity : 20 % - 80 % RH (non-condensing)	
Dimensions (W × H × D)	430 mm × 52 mm × 307 mm	
Mass (Weight)	3.5 kg	

Note:
Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

MEMO

Customer's Record

The model number and serial number of this product can be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number TU-PT600B Serial Number

Matsushita Electric Industrial Co., Ltd.

Web Site : http://www.panasonic.co.jp/global/

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